



URBAN WORLD ACTIVITY  
MALARIA ACTIVITY 1:  
WHAT IS MALARIA?



Jane Goodall's  
roots&shoots



## MALARIA ACTIVITY 1: WHAT IS MALARIA?

This activity is about malaria. In the UAE today malaria is often only thought about when travelling abroad for a holiday, but the country was only certified malaria free in 2007. Despite some great advances over the past few years, malaria is still an everyday issue for many with 3.2 billion people across the world classified as at risk of infection by the World Health Organisation (WHO). In this activity your students will be learning about the disease and who is at risk.

This activity is the first in a three part series on malaria. Each of the malaria activities is designed to be completed in a single lesson. They can all be downloaded from the Roots & Shoots UAE website at [www.rootsnshoots.ae](http://www.rootsnshoots.ae).

### IN THIS ACTIVITY YOU AND YOUR STUDENTS WILL:

- ▶ Learn about malaria: what it is, how it is spread and who is at risk.
- ▶ Create a wall chart all about malaria to display at school.

### OBJECTIVES

Carrying out this activity will help students learn about malaria, a disease which infects millions of people every year.

### WHAT DO I NEED TO MAKE IT WORK?

Access to the internet to do some background research will be useful but not required. You will need pens, paints or other craft supplies to help create your wallchart.

### WHAT THINGS WILL MY STUDENTS CREATE?

- ▶ A wall chart all about malaria.

## WHAT DO YOUR STUDENTS ALREADY KNOW ABOUT MALARIA?

Finding out what your students already know is a good place to start. Here is one way to frame this discussion, though be careful to adjust this appropriately if you have any students that are currently ill, or students with ill family members:

- ▶ First, make a list on your whiteboard/flipchart, of illnesses that your students know.
  - ▶ You could start by asking the students to name any illnesses that they remember having (e.g. toothache, a cold, flu, etc.). Try to split these up on the board into transmittable diseases (like cold or flu) and other illnesses (like toothache).
  - ▶ Now add in other diseases that they might have heard of. This might be things that they have heard about on the television, or things that they have seen a younger family member having vaccinations for (like measles or hepatitis).
  - ▶ If malaria has not been mentioned yet, try asking the students if they have ever had to take medicine for diseases that they don't have when they travel.
- ▶ If it has already been mentioned, then tell the students that you will be talking about malaria. If it has not been mentioned then now is the time to introduce it!
- ▶ Ask your students how many of them have heard of malaria. If some of the students have heard of malaria, then run a short brainstorming session to find out what they already know. If not then skip straight to the next section of the activity, below.
- ▶ The aim of the brainstorming session is to establish how much your students know already, and identify any misconceptions. You may find the questions below useful as prompts:
  - ▶ Where in the world does it exist?
  - ▶ What are the symptoms?
  - ▶ Who gets it?
  - ▶ How is it spread/where does it come from?
  - ▶ How do you treat it (you may wish to ask if anyone has taken anti-malarial treatments, e.g. when travelling with their family, or slept under a net)?
  - ▶ Can it be fatal?

## WHAT IS MALARIA?

Now the students are thinking along the lines of diseases it's time to cover the key points of malaria. Note that they may have covered some of these already in their brainstorming session, in which case now is the time to fill in any gaps and correct any misconceptions.

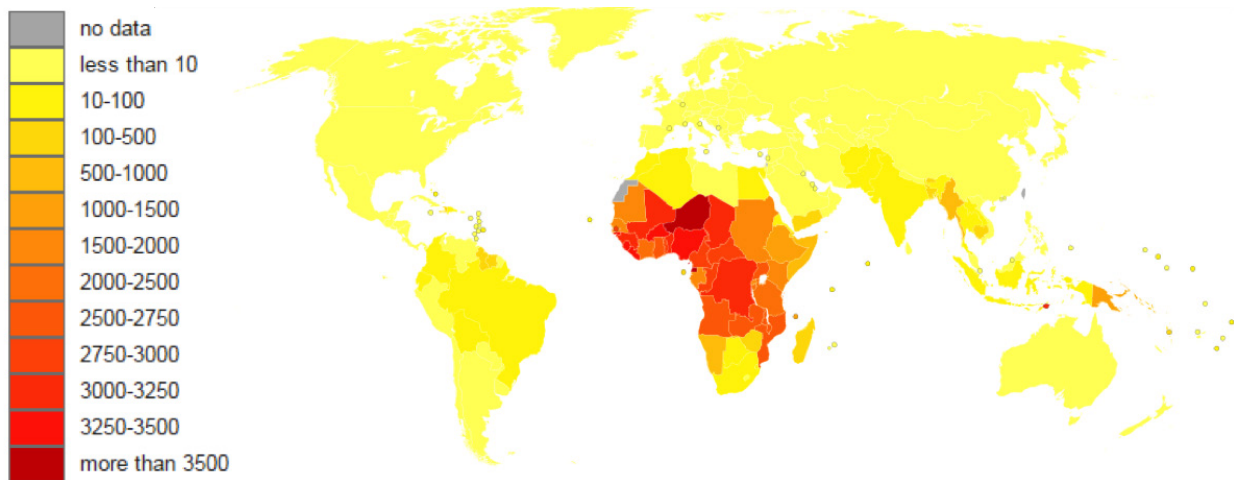
- ▶ Malaria is a parasitic disease. It isn't like a cold or chickenpox (which are viral infections); or like a sore throat or bad stomach (usually bacterial). Nor is it a cancer (abnormal cell growth) or, except in very rare circumstances, congenital (present at birth, like some heart problems).
  - ▶ *Optional:* can the students name any other parasitic diseases? Some they might have heard of are giardiasis and schistosomiasis (bilharzia). If they mention anything you are not sure about, you can find a pretty comprehensive list here: [goo.gl/tJJXR7](http://goo.gl/tJJXR7)



"Anopheles minimus" by Photo: James Gathany Content Provider: CDC – This media comes from the Centers for Disease Control and Prevention's Public Health Image Library (PHIL), with identification number #7950. Licensed under Public Domain via Wikimedia Commons – [goo.gl/oSu6kh](http://goo.gl/oSu6kh)

- ▶ Malaria is spread by mosquitoes (specifically pregnant female Anopheles mosquitoes). Unlike many diseases, especially viruses, it is almost impossible for malaria to be passed directly from one person to another.
  - ▶ *Optional:* can the students name any other mosquito-borne diseases? There are not so many, but it is possible they may have heard of West Nile Virus. Here is a list: [goo.gl/iov1bv](http://goo.gl/iov1bv)
- ▶ Malaria can cause a number of symptoms. The first symptoms usually appear 10-15 days after infection and include fever, headache, chills and vomiting. More advanced symptoms include severe anaemia and respiratory distress.
- ▶ According to the World Health Organisation, 3.2 billion people – nearly half of the world's population – are at risk of malaria.

- ▶ According to WHO estimates there were 198 million cases of malaria in 2013 (that's more than 20 times as many people as live in the UAE) and caused 584,000 deaths (about one third of the number of people living in Abu Dhabi city). Around 90% of the cases and deaths were in sub-Saharan Africa.



"Malaria world map – DALY – WHO2004" by Lokal\_Profil Licensed under CC BY-SA 2.5 via Wikimedia Commons – [https://commons.wikimedia.org/wiki/File:Malaria\\_world\\_map\\_-\\_DALY\\_-\\_WHO2004.svg#/media/File:Malaria\\_world\\_map\\_-\\_DALY\\_-\\_WHO2004.svg](https://commons.wikimedia.org/wiki/File:Malaria_world_map_-_DALY_-_WHO2004.svg#/media/File:Malaria_world_map_-_DALY_-_WHO2004.svg)

Darker colours indicate a greater number of people affected by malaria. The figures shown on the map and key are the disability-adjusted life year (DALY), which is a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.

- ▶ Children under the age of 5 are most at risk.
- ▶ There are some cases of malaria in the middle east, but the UAE was certified malaria free in 2007.
- ▶ Although these figures are staggering, it's important to stress that things are getting better. Between 2000 and 2015, malaria incidence fell by 37% globally; during the same period, malaria mortality rates decreased by 60%. An estimated 6.2 million malaria deaths have been averted globally since 2000.
- ▶ You can prevent malaria by preventing mosquito bites. One of the most effective ways to do this is to sleep under a special net that has been treated with insecticide.

Net use by itself is by no means a guarantee of avoiding malaria. Proper use of pesticides to kill mosquitoes in the home is also very important. If you travel from the UAE or other non-infected area to a place with lots of malaria then it is extremely important to also take anti-malaria medication.



By தகவலுழவன் (Own work) [GFDL (<http://www.gnu.org/copyleft/fdl.html>) or CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons

- ▶ Malaria can be effectively treated if caught early. The current best treatment is artemisinin-based combination therapy (known as ACT).
- ▶ There is currently no vaccine for malaria, but scientists are working on these and one (called RTS) may even be available in 2016!

1 Bulletin of the World Health Organization Volume 85, Number 7, July 2007, 501-568 <http://www.who.int/bulletin/volumes/85/7/07-020707/en/>

## FIND OUT MORE USING THESE LINKS:

- ▶ The WHO's malaria website: [goo.gl/3x4W7V](http://goo.gl/3x4W7V)
- ▶ The WHO malaria factsheet: [goo.gl/OjnbFq](http://goo.gl/OjnbFq)
- ▶ Malaria.com: [goo.gl/vnCKuY](http://goo.gl/vnCKuY)
- ▶ Malaria facts video: [goo.gl/syAjd6](http://goo.gl/syAjd6)

## MAKE A WALL CHART

Combine what your students have learned about malaria, to create a wall chart, to tell the rest of the school all about malaria. If you are intending to do the other activities in our malaria series then make sure you leave space for the wall chart to grow as the students learn more!

## LEARN MORE

This activity is the first of three on the topic of malaria – the others can be downloaded from the Roots & Shoots UAE website at [www.rootsnshoots.ae](http://www.rootsnshoots.ae). In the next activity we will look at the life cycle of the malaria parasite and see how knowing this can help us beat the disease. In the third activity we will look at the effects that malaria has on communities in sub-Saharan Africa and show you some ways that you can raise money to help!

## TELL US HOW YOU GOT ON

When your wall chart is finished, we'd love to see photos of it! If you already have an account you can upload a story with images to Roots & Shoots UAE ([www.rootsnshoots.ae](http://www.rootsnshoots.ae)) and create an online gallery on the website. If you don't already have an account then just send us an email to [MrH@rootsnshoots.ae](mailto:MrH@rootsnshoots.ae) and we can set you up.

## KEEP UP TO DATE WITH JANE GOODALL'S ROOTS & SHOOTS UAE

As well as the website at [www.rootsnshoots.ae](http://www.rootsnshoots.ae) you can also find us on Facebook at <https://www.facebook.com/RootsnShoots.ae> or on Twitter as [@JaneGoodallUAE](https://twitter.com/JaneGoodallUAE)

## WANT TO HELP IMPROVE THIS ACTIVITY?

This activity is a living document! Please help us by editing this activity to make it as good as possible. You can edit it by using this short link (just type it into your web browser's address bar): [goo.gl/blP2Ur](http://goo.gl/blP2Ur) – full instructions are provided. Any edits that can make this resource easier to use in the classroom or more applicable to life in the United Arab Emirates are very welcome, so please follow the link and make your contribution!